

Topic for master thesis (including a possibility for an internship at the Province of Utrecht)

## **Frontrunner regions for sustainability experimentation in Europe**

Supervisors: Harm van den Heiligenberg and Gaston Heimeriks

The sustainability challenge requires experimentation with innovations, followed by an upscaling process towards a wider regime change in the longer term. In Europe we observe various regional hotspots for sustainability experimentation. Berlin is well known for its grassroots food experiments, Barcelona is known for its experiments in fablabs, and so on. This points to favourable regional contexts. This experimentation phase may be followed by a “traveling” process, in which the innovation is transferred and translated to other locations.

In earlier research (van den Heiligenberg et al., 2017) we have proposed that regions favourable for sustainability experimentation need: (1) an adequate habitat for experimentation; and (2) a supportive harbour for transferring and translating the innovation to other locations and regions worldwide. A habitat is defined as a configuration of favourable regional context conditions, such as the existence of regional networks or the availability of funding; a harbour may be regarded as a characteristic of a receiving and a departing region. It may have a physical appearance (such as a real harbour), or may be used symbolically (e.g. a culture of openness).

With these insights it may be possible to identify frontrunner regions in Europe. Are we able to identify the regions in Europe who have a favourite habitat and harbour for the various types of sustainability experiments? This is the key research question for this master thesis. This research will be quantitative, data driven and has a strong geographical orientation. It will be needed to analyse two sets of databases:

- Databases which contain regional characteristics in Europe (demography, economy, socio-cultural factors, etc.). Key question is whether context factors from literature can be translated into indicators, which can be found in these databases. With these databases we might be able to identify frontrunner regions.
- Databases which contain descriptions of actual sustainability experiments in Europe, such as a database of living labs in Europe, supplemented by specific databases of energy, food or mobility experiments. With these databases it might be possible to validate the identification of frontrunner regions

The master student is asked to design a research that has an innovative and exploratory character.

The following steps should be part of the research design:

- A. Translating the context factors from the literature into indicators
- B. Making an inventory of useful databases
- C. Execute some explorations of finding frontrunner regions
- D. Make a final analysis, map the regions and write the thesis

There are a lot of possibilities to delineate this research, such as a general analysis of all the regions in Europe, or a more specific analysis of frontrunner regions for a specific sustainability theme.

You will work in close cooperation with Harm van den Heiligenberg. He is a PhD student in transition studies. Your data and results will contribute to his PhD research.

It is possible to combine this thesis with an internship at the Province of Utrecht. In that case the region of Utrecht should be included in the research.

More information: [harm.van.den.heiligenberg@provincie-utrecht.nl](mailto:harm.van.den.heiligenberg@provincie-utrecht.nl)

### **Recommended literature**

- Asheim, B. T., & Gertler, M. S. (2006). The geography of innovation: regional innovation systems. In *The Oxford Handbook of Innovation* (pp. 291–317).
- Hansen, T., & Coenen, L. (2015). The Geography of Sustainability Transitions: Review, Synthesis and Reflections on an Emergent Research Field. *Environmental Innovation and Societal Transitions*, 17, 92–109.
- Heiligenberg, H. A. R. M. van den, Heimeriks, G. J., Hekkert, M. P., & van Oort, F. G. (2017). A habitat for sustainability experiments: Success factors for innovations in their local and regional contexts. *Journal of Cleaner Production*.
- Heiligenberg, H. A. R. M. van den, Heimeriks, G. J. Hekkert, M. P., Raven, R. P. J. M., Sol, J. (in prep.). Contrasting habitats for urban sustainability experimentation in Europe. Paper to be submitted to the Special Volume, *Sustainability*
- Sengers, F., Wiczorek, A.J. & Raven, R., 2016. The Role of Experiments in Sustainability Transitions: A Systematic Literature Review. *Technological Forecasting and Social Change* 0040-1625